

Amendments to the Specification:

[0007] ~~Open Path, or Free Space Optics~~Open-path, or free space optics, is a line-of-sight technology that enables optical transmission of data, voice and video communications through the air, thereby providing optical connectivity without the need for expensive fiber-optic cable.

[0015] In another embodiment, the device again includes a first data communication device adapted to transmit data and a laser source modulated by the first data communication device. A first optical lens means having a ~~# to 2#~~ π to 2π steradians field of view is positioned in light dispersing relation to the laser source. A second data communication device is adapted to receive data and an optical detector adapted to generate electrical signals corresponding to detected optical signals is connected in driving relation to the second data communication device. A second optical lens means having a ~~# to 2#~~ π to 2π steradians field of view is positioned in light focusing relation to the optical detector. A barrier means preventing line-of-sight communication between the first and second data communication devices is adapted to be positioned in an enclosure between the first and second data communication devices.

[0021] An optical bandpass filter may be ~~electrically~~ connected between the second optical lens means and the optical detector.

[0034] Moreover, since the wavelength of a laser source is being detected, there is no need to bounce a wave away from target 16 to regenerate it at an intermediate station. Since the detector or sensor 20 can be a highly sensitive receptor device, there is no need for any amplification of the beam for the device to operate either at the source or at the intermediate target area. This enables use of a fairly low-power laser source, the sensitivity being a function of sensor 20 and not necessarily laser generator 12 or the presence of an unillustrated amplification device in target area 16 or anywhere else along the extent of the path of travel of the modulated beam.

[0042] In practice, this system can be used to control functions of televisions, computers, telecommunication devices, Internet devices, printers, and the like. In a specific embodiment of this system, with the use of a ~~# or 2#~~ π or 2π steradian solid angle lens and detector, any problems caused by obstacle 43 may be overcome with ease. In addition to control functions,

both analog and/or digital information may be conveyed in the light beam. This is accomplished by amplitude modulation of the power supply to the light source, such as an electro-optics modulator or a high electromechanical chopper to encrypt the information.

[0043] In the embodiment of Fig. 3, laser communication system 50 is modified to communicate between buildings 52 and 54. In this embodiment, an external target, here shown as tree 51, is used between source 54, modulated by transmitting device 55, and detector apparatus 56 that delivers the data to receiving device 57. Transmitter and receiver telescopes 53 and 59 are used in the same manner as in the embodiment of Fig. 1. Other types of targets may be used, including, but not limited to, clouds, buildings, direct atmospheric aerosols, atmospheric molecules, etc. As in the first two embodiments, the same type of information may be transmitted, and the same sources used, but greater distances are covered. Multiple transmitters may be employed in this system, and optical as well as laser sources may supply the light beam, and there may also be a plurality of receiving devices using different target areas or the same target area if the signals are encoded or different laser wavelengths and optically filtered detectors are used. Detection system 56 detects the scattered light emanating from target 51, irrespective of any intervening object in the direct optical pathway, which prevents point-to-point communication between source 54 and detector 56.